The U.S. Dry Bean Market In 2001/02

Aggregate Market Overview

U.S. dry bean harvested area has been slowly trending upward over the past 2 decades. However, acreage in 2001 was well below the indicated long-run trend level. Area for harvest was down 17 percent from a year earlier to 1.3 million acres. The basic reasons for this were high stocks and low prices across the bean industry. Acreage was down in 14 of the 17 major states in 2001. In Michigan, where planted dry bean area hit a record low, harvested area was estimated at 205,000—the lowest since 1988 when drought reduced area to 170,000 acres.

Steady gains in per acre productivity have been important in expanding gross revenue in the face of increasing costs and sluggish prices over time. Dry bean yields were the fourth highest on record in 2000 despite dropping 7 percent from 1999. In 2001, lack of timely rain in states such as Michigan and New York contributed to large reductions in yields. National yield dropped 11 percent from a year earlier and settled 10 percent below the long-term trend of 1,640 pounds per acre.

In October 2001, U.S. production of dry beans was estimated down 27 percent from a year earlier to 19.4 million hundredweight (cwt). Reduced output was expected for pinto, navy, black, Great Northern, cranberry, and lima beans. Increased production was anticipated for garbanzo and blackeye beans, with little change expected for small red and pink beans. A smaller crop and steady demand should go a long way toward emptying dry bean elevators and warehouses over the 2001/02 season. As a result, aggregate dry bean prices are expected to rise through mid-2002. With much improved grower prices in the 2001/02 marketing year, area planted to dry beans is expected to increase 20 to 25 percent in the spring of 2002.

According to year 2000 United Nations Food and Agriculture Organization (FAO) data, the United States is the world's sixth leading producer of dry beans. This includes round beans, broad or flat beans, and chickpeas. FAO's world dry bean statistics include all species of *Phaseolus* beans and in a few countries, such as India, also *Vigna* bean species. India, Brazil, and China were the top three producers, with 52 percent of world production among them. Mexico and Burma round out the top five. India is the leading producer of both round beans (20 percent of the world total) and chickpeas (two-thirds of the world total). China produces half of the world's flat beans.

Prices and Crop Value

Despite the low prices the past couple of years, the long-run trend in dry bean grower prices is rising. However, since 1996, a combination of high stocks and slow export markets has caused season-average grower prices to decline annually. In 2000/01, the season average dry bean price reached its lowest level in 18 years. Grower prices averaged an estimated $15.30 per cwt -- the lowest since 1982. With a small crop and limited stocks in the 2001/02 season, industry average grower prices are expected to exceed the long-run trend level of more than $23 per cwt.

Unfortunately, low prices have also meant low revenues. For the 2000/01 season, the preliminary farm value of the dry bean crop was estimated at $423 million. This was down 23 percent from the previous year and 27 percent below the average of the 1990s. North Dakota, Michigan, and California together accounted for 50 percent of crop value. Over the past 3 years, California's dry bean revenue has dropped to its lowest level since the early 1970s. During the 2001/02 marketing year, the reduction in the U.S. crop is expected to be outweighed by rising prices, which should raise the value of the coming dry bean crop to near $500 million.

On the retail side, retail dry packaged bean prices averaged 68 cents a pound for the first half of 2001. This was 1 percent lower than a year ago and 6 percent below the peak in 1997, reflecting lower grower and dealer prices.

During the third quarter of 2001, as grower prices began to react to lower supplies and strong exports, retail prices also began to rise, averaging nearly 69 cents a pound.

With low farm-gate prices, the grower share of the retail price for dry packaged beans has declined over the past few years from 30 percent to a low of 21 percent in the third quarter of 2000. Since then, grower share of retail has improved quarterly and is expected to exceed 25 percent during the last half of 2001 as grower prices rise.

Trade: Exports Down in 2000, But Up in 2001

The U.S. is a major player in the world dry bean market. During the 1997-99 period, the U.S. ranked third in terms of export volume behind Burma and China. Argentina and Canada round out the top 5 exporters. The size of Burma's dry bean crop is similar to that of the U.S. During 1997-99, Burma exported about half its dry bean crop with enough remaining to support a domestic use of about 26 pounds for each of its 45 million citizens. Canada, which expects a larger crop this year (up 14 percent) and higher exports, also exports well over half its annual supply of dry beans, but has a domestic consumption of only a few pounds per person.

On the import side, Brazil, Mexico, and Japan are the top import nations for dry round beans. These 3 countries account for 23 percent of world dry round bean imports. The United Kingdom and India round out the top 5 importers.

The United States maintains a solid, positive trade balance in dry edible beans. However, U.S. exporters have been operating in a tough economic environment, featuring a strong U.S. dollar and many competing suppliers. As a result, a combination of reduced volume and low market prices pulled last year's dry bean export value down 11 percent to $185 million. At the same time, imports continued to creep upward, totaling $35 million (excludes guar and other seed beans)—which was up 4 percent.

Although dry bean export volume declined 5 percent in calendar year 2000, exports are expected to increase in 2001. Export volume over the first 8 months of the year was up 24 percent from the previous year. Through August, export volume was up strongly for major classes such as navy, pinto, black, light-red kidney, and Great Northern beans. Partly offsetting were declines for limas, small red, dark-red kidney, and pink beans.

A substantial volume of U.S. dry bean exports is concentrated among relatively few countries. The top U.S. markets in 2000 included Mexico, the United Kingdom, Japan, and Canada. These 4 markets accounted for 42 percent of U.S. dry bean export volume in 2000. According to UN trade data, the U.S. held just 17 percent of the U.K. import market for dry beans—down from 57 percent in 1997, with navy (pea) beans accounting for most of the loss. However, U.S. pea bean exports to the U.K. returned to customary volumes in 2001. The U.S. continues to provide 95 percent of the Mexican import market and 80 percent of the Canadian market. The U.S. share of the Japanese dry bean market slipped from 15 percent in 1998 to 12 percent in 1999—losing share to countries such as China and Canada. China now holds 65 percent of the Japanese dry bean import market.

Over the last 5 years, an average of 19 percent of U.S. dry bean supplies have been exported. In 2000, about 8 million cwt, or 18 percent of available supply was exported. Estimates suggest exports could equal or exceed 9 million cwt in 2001.

As an industry, the reliance on export sales is relatively high when compared with fresh, canned, and frozen vegetables, which average about 8 percent. Shippers of navy, baby lima, dark red kidney, Great Northern, small red, and garbanzo beans count on exports to absorb a fifth or more of supplies. Reflecting strong world demand, about one-third of the U.S. garbanzo bean supply was exported in 2000. Only about 10 percent of pinto supplies were exported, but that number is expected to increase in 2001.

U.S. dry bean imports continue to trend higher and are expected to exceed 1.3 million cwt this year. Garbanzo

and blackgram/urd (used for dhal soup and sprouts) beans account for about half of the volume with smaller amounts of other classes. Mexico provides 85 percent of imported garbanzo beans while China, Thailand, and India are the leading sources of blackgram/urd beans. Imports from Canada of pinto, navy, kidney, and black beans are small but have been rising over the past few years. Dry bean imports accounted for about 6 percent of domestic consumption, up from the 5 percent average experienced over the last 20 years.

Aggregate Supply and Use

Putting together the production, trade, and inventory changes helps present a picture of supply and demand. With a smaller crop in 2000, total supply of all bean classes in calendar year 2000 declined 5 percent to 4.6 billion pounds. After accounting for exports, estimated seed use, and estimated stock changes, the remainder represents domestic disappearance. Americans consumed a record-high 2.1 billion pounds of dry beans in 2000. Population growth, low prices, new products, and shifting demographics each likely contributed to growth in domestic disappearance. According to USDA's *Continuing Survey of Food Intakes by Individuals* (CSFII), on any given day, nearly 14 percent of Americans consume at least one food containing dry beans.

Production declined again in 2001, further reducing available supplies. Increased exports also absorbed a portion of supply, which should add strength to prices but leave 2001 domestic consumption down from a year earlier.

Estimated consumption of dry beans rose in 2000 to 7.8 pounds per person. This equals the recent high seen in 1994 with both years the highest since 1961 (7.9 lbs.). Given the lack of national statistics on dry bean stocks, a change in per capita use for any one year may not be very significant. It may be more useful to follow the trend in the 3-year average of dry edible bean use. Three-year average consumption was up in 2000 to 7.6 pounds per person. Average consumption has been trending upward since bottoming out in 1980. The forecast for 2001 and 2002 indicates average use will remain flat in 2001 before declining slightly in 2002.

Regionally, 2000 per capita consumption was estimated to be greatest in the West at 13.4 pounds. Estimates suggest consumption in the South was about 8.7 pounds compared with around 4.3 pounds per person in the Northeast and Midwest.

Using distributors derived from the *CSFII*, it is possible to calculate use for the various bean classes and for various socioeconomic categories as well. For example, per capita consumption for various racial and ethnic groups may help tie trends in the U.S. population to changes in dry bean consumption.

Census data indicate that the Hispanic component of the U.S. population has been growing rapidly since the early 1980s—consistent with the growth in dry bean demand. U.S. consumers of Hispanic descent now account for about 11 percent of the population, with those of Mexican descent accounting for 5 percent of the population. According to distributors derived from the *CSFII*, consumers of Mexican descent eat the greatest amount of dry beans per capita—almost 34 pounds per person in 2000. That is very similar to the per capita bean use estimated for Mexico. Consumers of Puerto Rican descent consumed about 24 pounds per person, followed by other Hispanics at 16 pounds. In contrast, U.S. non-Hispanic whites, who make up 72 percent of the population, only consumed about 6 pounds of dry beans per capita.

Markets by Bean Class

Pinto beans: With persistently large stocks and low prices prompting reduced acreage, the 2001 pinto bean crop will likely be reduced below 9 million bags, the smallest since 1993. Since domestic and export demand is estimated to be around 11 million bags, stocks should decline and prices rise during the 2001/02 market year.

The extent of the increase in pinto bean prices will be partly determined by the strength of exports in 2001. Since January 2001, export volume had been running well above the previous year as shipments to Mexico were

stronger due to dry weather in a few producing regions. Dealer prices in Colorado, which averaged around $21per cwt in 2000/01, are expected to average above trend level ($24.50 per cwt) in 2001/02.

Pinto beans exhibited the largest gain in consumption between the 1990-94 and the 1980-84 periods--moving up 70 percent from 2.0 to 3.4 pounds per person. Much of this gain is attributable to the growing popularity of various ethnic cuisines featuring dry beans and the increasing Hispanic population in the U.S. On any given day in the U.S., nearly 4 percent of the population consumes pinto beans, with another 2 percent consuming refried beans, which are largely made from pintos.

Per capita use of pinto beans was estimated at just under 3.6 pounds in 2000—down slightly from 1999. Pinto use is forecast to fall to 3.5 pounds in 2001 with total domestic food utilization at around 970 million pounds

Navy beans: Navy bean production also declined sharply in 2001. In fact, when the data are released in December, it will likely indicate the crop was as small or smaller than the drought year of 1988, when just 3.4 million cwt was produced. Extreme dryness in Michigan sliced yields and reduced the navy bean crop. In any event, with a smaller crop and improved exports in 2001, stocks will likely be reduced by more than half since annual domestic and export demand (around 5.5 million cwt) will exceed expected production in 2001. Thus, reduced supplies in the face of stable domestic demand and improved export demand will support much higher navy bean prices into 2002.

Despite the fact that about 4 percent of Americans eat navy beans in some form on any given day, navy bean use continues to trend lower. There have been periods where use has increased for a few years--the last being in the mid-1990s. These brief gains may reflect introductions of new products or temporary changes in dietary habits. Basic analysis suggests that navy bean demand suffers from the same phenomenon as most other bean classes—lack of penetration in the food service market. Refried beans are the most notable exception.

USDA food consumption surveys indicate that 86 percent of navy beans are purchased in stores for home use. At the same time, consumers are purchasing an ever-growing volume of meals away from home. Although this may be changing, fewer people take the time to prepare meals from scratch, which has been tough on sales of dry packaged beans. In any event, per capita use of navy beans was estimated at 1.2 pounds in 2000, with the 3-year moving average also at 1.2 pounds. Domestic navy bean utilization totaled about 320 million pounds in 2000 and is forecast to decline to about 310 million pounds in 2001.

Great Northern beans: The supply of Great Northern beans will be smaller in the 2001/02 marketing year. Area planted declined 15 percent in 2001 due to lower prices resulting from elevated stocks built up by consecutive large crops in 1999 and 2000. With yields also down slightly, production is expected to have declined in 2001. A 9-percent rise in export volume during the first 7 months of 2001 also helped reduce stocks.

The season-average dealer price for 2000/01 is estimated to be about $23.25 per cwt, down slightly from the previous season. For the coming season, export demand may remain steady with smaller crops in competing countries such as Turkey and China. Thus, U.S. supplies should be reduced and dealer prices could strengthen toward trend levels ($28 per cwt) in the coming marketing year.

Domestic consumption of Great Northern beans appears to be remarkably stable compared with other classes. Average per capita use of Great Northerns has remained unchanged over the past 3 decades—averaging 0.43 pounds in the 1970s, the 1980s, and the 1990s. In 2000, domestic utilization of Great Northern beans is forecast to remain steady at 120 million pounds, or 0.44 pounds per person.

Light red kidney beans: Smaller corrections are expected in both red kidney bean markets than for pintos

and navys. Production of light red kidney beans is expected to drop 15 to 20 percent as lower prices encouraged a 12-percent reduction in acreage. With relatively steady demand, production of light red kidneys has averaged around 1.3 million cwt during the last five years—up 8 percent from the average of the previous 5 years. The 2001 crop is smaller than average and follows slightly above-average crops the past 2 years.

The estimated season-average dealer price for Michigan light reds declined about 5 percent in 2000/01. Light red prices averaged about $30 per cwt over the past decade but have been well below that the past 2 years. In the coming year, with a smaller crop reducing supplies, dealer prices will likely reach the $30 level or higher.

Four percent of Americans eat red kidney beans on any given day. Per capita use of all red kidney beans jumped in the 1990s for the same reasons cited earlier for pintos. In fact, comparing the pinto bean per capita use trends to kidney bean trends, the similarities in trends become apparent. Especially striking is the rise in use in the early to mid-1990s followed by a stabilization of consumption. Per capita use of all red kidney beans has remained around 0.6 pounds for the past several years.

Between two-thirds and three-quarters of domestic red kidney consumption consists of light reds. Around 112 million pounds of light reds were consumed domestically in 2000. In 2000, per capita use of light reds totaled 0.4 pounds—unchanged from a year earlier.

Dark red kidney beans: Dark red kidney bean acreage declined about 5 percent in 2001 due to low export demand and poor prices in the previous year. Dark red production has varied more than light red over the last decade largely because of the high reliance on export markets. Reflecting a weak export market, dark red kidney production averaged just under 1 million cwt over the past 5 years—down 8 percent from the previous 5 years. The 2001 crop is expected to fall about 10 percent from a year ago.

The main challenge in the dark red market has been sharply declining export demand over the last several years. Export volume in 2000 was the lowest in many years---a concern since dark reds have come to rely heavily on exports. Through July of 2001, exports were down 20 percent from the previous year. As recently as 1997, 45 percent of supplies were exported, although this has since declined each year to a low of 29 percent last year.

Dark reds, which are more heavily exported, had a domestic per capita consumption of about 0.2 pounds in 2000—up slightly from a year earlier. An estimated 60 million pounds of dark reds were consumed domestically in 2000.

Black beans: Despite past overproduction, extremely low prices, large stocks, and slow export markets, grower optimism in Michigan late in the planting season on export markets prompted a small increase in black bean area in 2001. However, drought-reduced yields in Michigan and New York will leave the 2001 black bean crop below the previous year, which was the lowest since 1993. With production remaining well below average annual domestic and export demand, ending stocks in August 2002 should be very low. During the first 8 months of 2001, official export volume estimates were up 81 percent from a year ago as exports to Mexico under the NAFTA tariff rate quota had picked up. Volume is expected to remain above the previous year during most of the second half of 2001.

In January 2001, dealer prices reached their lowest level of the past decade at $15.56 per cwt. However, the market tone began to change with a late-season rally. As a result, the season-average dealer price for the 2000/01 market year was expected to remain about even with the previous year at around $18.40 per cwt—still the lowest since black bean prices were first reported in 1989. With the small 2001 crop and declining stocks, dealer prices will likely surge to more than $40 per cwt in the 2001/02 market year.

Consumer interest in black beans has been a 1990s phenomenon in the U.S., but average use may have peaked

in 2000. In 2000, black bean use totaled nearly 0.6 pounds per person---the equivalent domestic utilization of 155 million pounds. This is remarkable considering that, until the 1990s, black beans were grown mostly for export with very little consumed domestically.

***Baby lima beans**:* The baby lima market bears striking similarity to the dark red kidney market in that both depend heavily on exports which have fizzled over the past few years. With stocks slightly above average, exports down, and prices low, acreage dropped 50 percent in 2001. Thus, production of baby limas will decline substantially in 2001. The season-average price for baby limas in 2000/01 was estimated to be $25.70 per cwt--down 9 percent from a year earlier and the lowest since 1992. With a smaller crop, stocks will be reduced and prices should recover over the marketing year. However, the extent of price recovery ultimately depends on strength in the export market. Exports to Japan, the primary market, showed few signs of resuming past volumes through July of 2001. Baby lima exports were down 31 percent from a year ago during the first 8 months of the year.

Domestic utilization of all dry lima beans totaled 49 million pounds in 2000—down from 58 million in 1999. This works out to about 0.17 pounds per person in 2000—down from 0.21 in 2000. Large limas accounted for about 60 percent of total lima per capita use in 2000. Similar to the kidney bean breakout, baby limas feature an important export component while large lima sales are more concentrated in the domestic market. Large lima per capita use was about a tenth of a pound while baby limas were just under a tenth of a pound.

***Blackeye beans**:* The 2000 blackeye crop was the smallest since 1949 coming on the heels of 1999s record-large crop. Signs of life were creeping back into the blackeye market in early 2001 with the 2000/01 season-average price up about 11 percent from the 1999 low. Although production was expected to rise by about one-third in 2001, it will likely remain below the average of the past 5 years (74 million pounds). In the 2001/02 market year, dealer prices are expected to continue their slow recovery. Barring an unusual jump in export activity, dealer prices may remain just below the $32 per cwt average of the 1990s.

***Small red beans**:* The small red bean market has also been suffering from a slowdown in exports the past couple of years. During the first 8 months of 2001, small red export volume was down 25 percent from the previous year. Small red bean production in 2000/01 was the lowest since 1958. This small crop was a reaction to a buildup of stocks and associated low prices during the 1999 season. With lower supplies, prices improved by about 10 percent in 2000/01 over year-earlier lows. As a result, planted acreage rose 7 percent in 2001. However, low yields in Michigan likely left 2001 production below a year earlier. The unexpected decline in output will likely be less than the average of the past 5 years since export demand remains subdued.

***Pink beans**:* Last year's pink bean crop was the smallest since 1960. Aided by a surge in exports last year (partly due to food aid to Angola), supplies were partially reduced and pink bean prices have been gradually moving higher. As a result, production could rise 10 to 20 percent in 2001 from a year ago. Although domestic demand appears relatively stable, exports vary widely and were very low through August of 2001.

***Chickpeas (garbanzo)**:* Spurred by strong global demand a year ago, production reached a record-high 1.3 million cwt. Export volume began the year strong but has since tailed off. Exports have declined 8 percent during the first 8 months of 2001, despite increased volume shipped to countries like Italy and India. With supplies strong, dealer prices have fallen back to levels last seen in 1988. Area planted rose about 6 percent in 2001 based largely on expected export opportunities later in the marketing year. If these opportunities do not materialize, area planted will likely be trimmed in 2002.